

论著

斑点杂交技术用于蛙钩端螺旋体病的流行病学调查研究

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摘要:

**【摘要】** 目的 用Dot blotting杂交技术检测蛙类钩端螺旋体(钩体),为动物钩体的流行病学监测和调查提供一种比较理想的方法。方法 根据钩体赖株DNA合成1对flaB引物,用PCR技术对钩体菌株、疫区现场蛙肾材料等进行flaB基因扩增,用地高辛(DIG)标记flaB基因探针,用斑点杂交技术进行检测。结果 结果表明用DIG标记的flaB探针可以检测到5 fg及以下的DNA扩增产物。疫区70份蛙肾标本,斑点杂交检测阳性19份,阳性率为27.14%。而钩体细菌分离阳性者只有8份,阳性率11.43%,PCR扩增阳性者14份,阳性率20.00%。结论 Dot blotting杂交是一种灵敏、特异、快速的钩体检测方法,可用于两栖类钩体的流行病学监测和调查。

关键词: 斑点核酸杂交 钩端螺旋体 蛙 流行病学

Epidemiological investigation of frog leptospirosis by dot blotting

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Abstract:

**【Abstract】** Objective To detect leptospira in frogs by Dot blotting and to establish a promising technique used for epidemiological investigation and surveillance of leptospirosis. Methods A pair of flaB primer was synthesized according to the sequences of flaB from Lai strain of Leptospira icterohaemorrhagiae, and was used to amplify the flaB gene of leptospira in frog specimens collected from leptospirosis epidemic area, Anhui province. PCR products were then moved to NC membrane and hybridized with flaB probe labeled with digoxigenin. Results The results demonstrated that only 5 fg of purified DNA of leptospira could give a positive signal by Dot blotting. There were 19 positive samples detected by Dot blotting among 70 samples of frog kidneys, and the positive rate was 27.14%. Eight samples were positive by cultivating, and the positive rate was 11.43%. A total of 14 samples detected by PCR were positive, and it was 20.00%. Conclusion Dot blotting by flaB probe labeled with DIG is a high sensitive, specific and rapid technique for epidemiological investigation of frog leptospirosis.

Keywords: Dot blotting Leptospira Frog Epidemiology

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